Attorney Docket No.: AURO1160-7

In re Application of Shumate et al.

U.S. Serial No.: 10/082,974

Filed: February 25, 2002

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IN THE CLAIMS

Claims 1-30 (canceled)

- 31. (Presently amended) A chemical solution distribution system for distributing chemical solutions into multiwell plates having at least 384 wells, the system comprising:
- a) <u>a plurality of at least one</u> liquid handlers, each liquid handler comprising <u>96</u> 48 or more, but not less than 384, tips, said tips having a dynamic range of liquid dispensation of 100 to 2000 nanoliters, and
- b) an orthogonal positioner, said liquid handler comprising a tip dispensing matrix with about 96-or more tips, being capable of moving said at least one multiwell plate with an X-Y location accuracy of at least +/- 0.09 mm in X and Y.
- 32. (New) The chemical solution distribution system of claim 31, further comprising: a Z-positioner; and

each of said plurality of liquid handlers further includes a wash station below said tips, wherein said Z-positioner is capable of moving said tips into contact with solution in said wash station.

- 33. (New) The chemical solution distribution system of claim 31, further including a computational unit to reformat from a first density to a second high density multiwell plate.
- 34. (New) The chemical solution distribution system of claim 31, further comprising at least one stacker, said stacker capable of storing said multiwell plates.

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- 35. (New) The chemical solution distribution system of claim 34, further comprising a conveyer belt, said conveyor belt being capable of moving at least one multiwell plate between said plurality of liquid handlers and at least one stacker.
- 36. (New) The chemical solution distribution system of claim 35, wherein: each of said multiwell plates has a lid;

said chemical solution distribution system further comprising a delidder, said delidder capable of removing and replacing a lid on each of said multiwell plates; and

said conveyor belt further capable of moving said multiwell plates between said plurality of said liquid handlers, said at least one stacker, and said delidder.